

NISSAN · POWERTRAIN

P1126

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1126 · Nissan

Thermostat Function

P1126 on Nissan vehicles indicates that the engine control module (ECM) has detected a thermostat function fault, typically because the engine coolant temperature did not reach the expected operating range within a calibrated time after a cold start. The ECM monitors coolant temperature sensor signals and compares the warm-up rate against a model; when the actual temperature rise is too slow or inconsistent, it stores this code.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Nissan specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially in mild weather or during short trips.
- Engine takes unusually long to reach normal operating temperature, or the temperature gauge stays low.
- Heater output may be weak or inconsistent, particularly at idle or in cold ambient temperatures.
- Fuel economy may drop slightly because the ECM stays in cold-enrichment mode longer than normal.
- In some cases, the cooling fan may run continuously or the ECM may limit certain functions as a failsafe.
- A pending or stored P1126 may be accompanied by a P0128 code in some Nissan models, though P1126 is the primary thermostat monitor.

Common causes, most likely first

- 1 A thermostat that is stuck open or opening too early, preventing the engine from reaching and maintaining proper operating temperature.
- 2 A thermostat that is stuck closed or partially restricted, causing overheating or erratic temperature behavior.
- 3 A faulty engine coolant temperature (ECT) sensor or a wiring issue in the sensor circuit, sending inaccurate temperature data to the ECM.
- 4 Low coolant level or air pockets in the cooling system, which can cause the ECT sensor to read incorrectly and mimic a thermostat fault.
- 5 A defective coolant temperature sensor connector, corrosion, or damaged harness, leading to intermittent or skewed signals.
- 6 An ECM calibration issue or a faulty ECM, though this is rare and should only be considered after all mechanical and electrical checks pass.
- 7 Incorrect thermostat installation (e.g., wrong temperature rating, missing bleed hole orientation, or a stuck-open aftermarket thermostat) that does not match Nissan specifications.



How to diagnose and fix it

- 1 Verify the coolant level is correct and the system is properly bled of air; top up and bleed as needed, then clear the code and test-drive.
- 2 Use a scan tool to monitor engine coolant temperature (ECT) from a cold start and compare the warm-up rate to Nissan specifications; a slow rise indicates a thermostat problem.
- 3 Inspect the ECT sensor and its connector for corrosion, damage, or loose pins; test the sensor resistance against a temperature chart and replace if out of specification.
- 4 Check the thermostat housing and hoses for leaks or restrictions, and confirm the thermostat opens at the specified temperature using an infrared thermometer or by removing and testing it in hot water.
- 5 If the thermostat is suspected, replace it with an OEM or equivalent thermostat of the correct temperature rating, and refill the cooling system with the specified coolant and bleed properly.
- 6 Clear the diagnostic trouble codes (DTCs) and perform a drive cycle that includes a cold start and sufficient warm-up time to allow the monitor to run; confirm the code does not return.
- 7 If the code persists after all mechanical and electrical checks, inspect the ECM software for updates or, as a last resort, test the ECM for internal faults.

Thermostat code traps Nissan technicians know

- A stuck-open thermostat is the most common cause of P1126, but many technicians replace the thermostat only to find the real problem is a skewed ECT sensor or air trapped in the cooling system after a recent repair.
- The ECM's thermostat monitor only runs under specific conditions: the engine must be cold-started, ambient temperature must be within a certain range, and the vehicle must be driven in a way that allows warm-up; short trips or very cold weather can prevent the monitor from completing and set a false code.
- After replacing a thermostat, air pockets in the cooling system can cause the ECT sensor to read erratically and immediately reset P1126; proper bleeding is critical and often overlooked.
- Some aftermarket thermostats have a different opening temperature or bleed hole design that does not meet Nissan's specifications, leading to repeated P1126 codes even though the part is new.
- P1126 can be set by a failing coolant temperature sensor that reads slightly low without setting a sensor-specific code, so always compare live ECT data to actual coolant temperature with an infrared thermometer before condemning the thermostat.

Can I keep driving with P1126?

You can generally continue driving with P1126, but avoid extended idling and heavy loads until the fault is repaired, because a stuck-open thermostat can cause the engine to run cold, reducing fuel economy and increasing wear. If the engine overheats or the temperature gauge climbs into the red, stop driving immediately to prevent engine damage.



Tools that help

- OBD-II scan tool with live data capability
- Infrared thermometer
- Digital multimeter
- Coolant refractometer or hydrometer
- Basic hand tools (socket set, pliers, screwdrivers)
- Coolant bleeding kit or funnel

Reading P1126

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Nissan): its meaning depends on the make.

1 Fuel and air metering.

26 The exact fault within that area.

Often seen with

P0115 Engine Coolant Temperature Circuit Malfunction · **P0116** Engine Coolant Temperature Circuit Range/Performance · **P0117** Engine Coolant Temperature Circuit Low Input · **P0118** Engine Coolant Temperature Circuit High Input · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1126/>

